

REMARKS

Claims 1-26 have been pending in the application. Claims 1-4, 8-13, 17-22, 25 and 26 have been rejected. These rejections are respectfully traversed. However, to further the prosecution of this application, Claims 1-3, 10-12, and 19-21 are canceled by this amendment. The Applicants do not concede to the Examiner's rejections and reserve the right to prosecute the canceled claims in continuation applications.

Allowable Subject Matter

The Applicants note with appreciation the indication of allowability of Claims 5-7, 14-16, 23 and 24. These claims have been rewritten so as not to depend upon the rejected base claims.

Claim Rejections Under 35 U.S.C. 102

Claims 1-4, 10-13, and 19-22 have been rejected under 35 U.S.C. § 102(e) as being anticipated by Romanov (U.S. Patent No. 6,434,144). This rejection is respectfully traversed and reconsideration is requested.

Claims 1-3, 10-12, and 19-21 have been canceled and will be prosecuted in continuation applications. Claims 4, 13, and 22 have been rewritten in independent form.

The present application is directed to minimizing the number of writes necessary to update routes in a lookup table. A default route memory stores a default route for a subtree, and that default route may be shared by nodes in the subtree. The default route may be modified by performing a single write to the default route memory. An inherit indicator may be stored in the default route memory instead of the default route to indicate that the default route associated with the root of the subtree is inherited from another subtree. The inherited default route is forwarded by a default index pipeline.

Romanov teaches a multi-level table that is searched for an item matching a search key. For example, the multi-level table may be a table storing Internet Protocol prefixes (Abstract). "Entries of a first level of the multi-level search table may contain a default value, and other levels of the multi-level search table may contain a default value designator. Updating may be pipelined." (Col. 3, ll. 59-64).

Nowhere does Romanov teach or suggest using a default index pipeline to forward the inherited default route. The Examiner points to the statement in Romanov indicating that updating may be pipelined as showing that the inherited default root is forwarded by a default index pipeline. The Applicants respectfully disagree. In noting that updating may be pipelined, Romanov indicates that different levels of the search table may be updated such that the search table is kept in a consistent state after each individual write access is performed (Romanov, Col. 20, ll. 42-44). Nowhere does Romanov teach a default index pipeline or show the specifics of how the inherited default route is forwarded during the search. Therefore, now independent Claims 4, 13 and 22 are not anticipated by Romanov and the rejection should be withdrawn.

Claim Rejections Under 35 U.S.C. 103

Claims 8, 9, 17, 18, 25 and 26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Romanov. This rejection is respectfully traversed and reconsideration is requested.

Nowhere does Romanov teach or suggest making a distinction between sparse and dense subtrees and treating a table differently based on the number of routes it stores. The Examiner states “that the multi-level data structure of Romanov suggests that it could be a sparse subtree (layer) with a number of routes of one or greater than one. Therefore, it would have been obvious to have a sparse subtree with a number of roots of one or greater than one implemented in the multi-level data structure of Romanov.” The Applicants respectfully disagree. However, *arguendo*, even if it were obvious that a level may be a sparse subtree with a number of routes of one or greater than one implemented in the multi-level data structure, as asserted by the Examiner, it would still not render obvious having a sparse subtree entry associated with the subtree, as is recited, for example, in now independent Claims 8, 17 and 25. Nor does it render obvious the default route memory being stored in a default mapper entry associated with the sparse subtree descriptor, as is recited in Claims 9, 18 and 26. Therefore, Claims 8, 9, 17, 18, 25 and 26 are not obvious in view of Romanov and the rejection should be withdrawn. All claims are now believed to be in condition for allowance.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

Respectfully submitted,

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